

Planning & Development Department

INSPECTIONS UPDATE

City of High Point, North Carolina
Winter 2008
Quarterly Newsletter



Available Training Opportunity

The Inspection Services Division will be sponsoring a training class on **Areas of Rescue Assistance and Automatic Sprinkler Systems**. This class will be presented by Laurel Wright, the Chief Accessibility Code Consultant for the NC Department of Insurance. Six hours of continuing education credit applicable to either a building or fire certification will be available. Design professionals, contractors, and other interested persons are also invited to attend.



This class will be held on Wednesday, January 14, 2009 at the High Point Museum located at 1859 East Lexington Avenue from 8 AM to 4 PM. Class cost will be \$15.00 which includes lunch.

Pre-registration by January 8, 2009 is required. For registration information please contact Jimmy Lawson at 336-883-3275 or jim.lawson@highpointnc.gov.

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Do We Have Your Valid E-Mail Address?

It is now possible for permit holders to have inspection results emailed directly to them upon completion of the requested inspection. Permit specialists are asking for that information when permits are issued. However, existing permits can also be included. Just call in to our staff and have your records updated. Please call 336-883-3151 and one of our permit specialists will be glad to assist you.



What Service Improvements Would You Like to See?

As the Planning and Development Department and the Inspection Services Division continue to explore ways to improve our delivery of services, we often ask what our customers want. Input from everyone is vital for these improvements to occur. Please feel free to email Inspections Administrator Edwin Brown at edwin.brown@highpointnc.gov or call him at 336-883-3328.

In addition, do you have a question about our current services or do you have a comment about service that you have received? Please feel free to call or email Ed with that request for a prompt response.

BUILDING

Scheduling Inspections

As many of you know the City offers a 24/7 automated inspection request line. To help this process run smoothly please have your permit number and contractor identification number available when scheduling these inspections. If you are not sure of your contractor identification number you may simply press the # key to proceed. It would also be helpful to key in a phone number that you can be reached at when asked to do so. All inspection requests must be received by midnight to insure next day service. In the event the system is down due to weather, power interruption, etc., please call and leave the information on your assigned inspectors' telephone number. Numbers of each should be given to you at time of permit issuance and the number is also included on your permit placard.



When requesting **footing** inspections please be sure to leave a message on the system giving us a time as to when the footing will be ready for inspection. This will prevent unnecessary trips to the jobsite and reduce the possibility of re-inspection fees. If the footing or any other work is done in increments please remember that the system can only take one inspection at a time. If another inspection is going to be needed of the same type the following day please wait until at least 4pm (but before midnight) prior to scheduling. If the contractor/owner is on the jobsite and present for an inspection you could ask the inspector to enter the inspection in the afternoon after posting his/her work. This will help to insure that your request is not overlooked. Keep in mind that this should be arranged with your individual inspector.

When requesting **foundation** inspections please be sure to review any notes from earlier inspections. Often when property lines and setbacks are in question at the footing inspection, a survey will be required to be submitted before or be available on site at the foundation inspection for single-family/duplex homes. Planned developments must have these surveys approved by the City of High Point Planning and Development Department prior to scheduling your foundation inspection.

When requesting **slab** inspections make sure that plumbing and electrical slab inspections have passed before scheduling.

In addition if the electrical system must be grounded to rebar in the slab or footings please make sure this is in place as well so it can be noted on our report. In the event a survey is required on a monolithic slab keep in mind it should be provided to this office and approved before proceeding with any framing. No inspections will be given beyond this point if this information has not been provided. As mentioned earlier please be sure to leave a time when the slab will be ready.

When requesting **framing** inspections please be sure all of your rough inspections have been completed and approved on plumbing, electrical and mechanical. If a sprinkler system or fire alarm system is installed, a rough fire inspection must also be completed. Anything other than wood structural panels will need to be inspected before applying any house wrap to insure that proper attachment has been achieved. When wood structural panels are used for sheathing, an inspection is required after applying house wrap to insure windows are installed and flashed properly. Obviously these exterior types of framings could be scheduled prior to interior roughs being completed. However when this is needed you will need to leave a message on the system stating that the inspection is only for the exterior.

When scheduling **insulation** inspections please be sure to include a framing inspection request if they are any outstanding framing corrections.

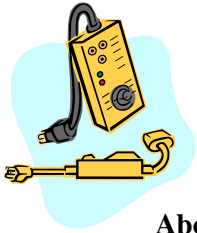
At the time of **final inspection** please keep in mind that all other trade finals must be completed before requesting your building final. This would include driveway, fire and zoning inspections if applicable.

Finally, our system currently includes an option for requesting a temporary certificate of occupancy. Please keep in mind that these must be applied for by the owner and are reviewed on a case by case basis.

If the application is approved a separate approval will be issued at that time.

Should you have any building questions or comments, please contact Building Supervisor, Darrell Long at 336-883-3323.

ELECTRICAL



New Electrical Code Revisions and Changes

Raceways in Wet Locations Above Grade, Section 300.9:

This is a new section that specifically addresses the cables and conductors installed within raceways located in wet locations above grade.

Where raceways are installed in a wet location above grade, the interior of these raceways shall be considered to be a wet location. Insulated conductors and cables installed in raceways in wet locations above grade shall comply with one of the following:

1. Be moisture impervious metal sheathed.
2. Be of Types MTW, RHW, RHW-2, TW, THW, THW-2, THHW, THWN, THWN-2, XHHW, XHHW-2, ZW.
3. Be of a type listed for use in wet locations

Multi-wire Branch Circuits

Definition, Section 100:

A branch circuit that consists of two or more ungrounded conductors that have a voltage between them, and a grounded conductor that has equal voltage between it and each ungrounded conductor of the circuit and that is connected to the neutral or grounded conductor of the system.

General, Section 210.4 (A):

A multi-wire circuit shall be permitted to be considered as multiple circuits. All conductors of a multi-wire branch circuit shall originate from the same panel board or similar distribution equipment.

Disconnecting Means, Section 210.4 (B):

Each multi-wire branch circuit shall be provided with a means that will simultaneously disconnect all ungrounded conductors at the point where the branch circuit originates.

Grouping, Section 210.4 (D):

The ungrounded and grounded conductors of each multi-wire branch circuit shall be grouped by wire ties or similar means in at least one location within the panel board or other point of origination.

Exception: *The requirement for grouping shall not apply if the circuit enters from a cable or raceway unique to the circuit that makes the grouping obvious.*

GROUNDING AND BONDING

Bonding for Other Systems, Section 250.94:

An intersystem bonding termination for connecting intersystem bonding and grounding conductors required for other systems shall be provided external to enclosures at the service equipment and at the disconnecting means for any additional buildings or structures. The intersystem bonding termination shall be accessible for connection and inspection. The intersystem bonding termination shall have the capacity for connection of not less than three intersystem bonding conductors. The intersystem bonding termination device shall not interfere with opening a service or metering equipment enclosure. The intersystem bonding termination shall be one of the following:

1. A set of terminals securely mounted to the meter enclosure and electrically connected to the meter enclosure. The terminals shall be listed as grounding and bonding equipment.
2. A bonding bar near the service equipment enclosure, meter enclosure, or raceway for service conductors. The bonding bar shall be connected with a minimum 6 AWG copper conductor to an equipment grounding conductor(s) in the service equipment enclosure, meter enclosure, or exposed nonflexible metallic raceway.
3. A bonding bar near the grounding electrode conductor. The bonding bar shall be connected to the grounding electrode conductor with a minimum 6 AWG copper

conductor. *(continued on next page)*

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(Electrical continued from page 3)

Exception: In existing buildings or structures where any of the intersystem bonding and grounding conductors required by 770.93, 800.100(B), 810.21(F), 820.100(B), 830.100(B) exist, installation of the intersystem bonding termination is not required. An accessible means external to enclosures for connecting intersystem bonding and grounding electrode conductors shall be permitted at the service equipment and at the disconnecting means for any additional buildings or structures by at least one of the following means:

1. Exposed nonflexible metallic raceways.
2. An exposed grounding electrode conductor.
3. Approved means for the external connection of a copper or other corrosion-resistant bonding or grounding conductor to the grounded raceway or equipment.

Buildings or Structures Supplied by a Feeder(s) or Branch Circuit(s)

Grounded Systems, Section 250.32 (B):

For a grounded system at the separate building or structure, an equipment grounding conductor as described in Section 250.118 shall be run with the

supply conductors and be connected to the building or structure disconnecting means and to the grounding electrode(s). The equipment grounding conductor shall be used for grounding or bonding of equipment, structures, or frames required to be grounded or bonded. The equipment grounding conductor shall be sized in accordance with 250.122. Any installed grounded conductor shall not be connected to the equipment grounding conductor or to the grounding electrode(s).

Exception: For existing premises wiring systems only, the grounded conductor run with the supply to the building or structure shall be permitted to be connected to the building or structure disconnecting means and to the grounding electrode(s) and shall be used for grounding or bonding of equipment, structures, or frames required to be grounded or bonded where all the requirements of (1), (2), and (3) are met: (1) An equipment grounding conductor is not run with the supply to the building or structure. (2) There are no continuous metallic paths bonded to the grounding system in each building or structure involved. (3) Ground-fault protection of equipment has not been installed on the supply side of the feeder(s).

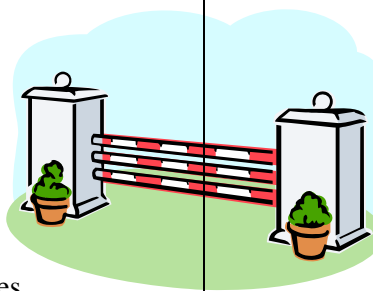
If you have any electrical questions or comments please contact Electrical Supervisor, Phil Barham at 336-883-3319.

LOCAL CODES

Regulations and Guidelines Concerning Fence Installations:

The City of High Point requires a permit to construct a fence. A permit is required for both commercial and residential fences. The High Point Development Ordinance regulates the height, location and type or style of fences. The ordinance also addresses prohibited fence types.

Masonry or stone walls, ornamental iron, chain link and wood or similar material are types of fences that



are permitted in all zoning districts. Fencing with barbed wire located in residential districts is only

allowed by Board of Adjustment approval, meeting specific restrictions with regard to location, height and Police documented security reasons for the barbed wire.

The development ordinance does prohibit certain types of fences due to safety or fire issues. A fence which carries an electrical current is not allowed except for the purpose of containing constructed of a

combustible material such as paper, cloth or canvas.
A fence in a residential district is prohibited to be
topped with metal spikes, except those that service a

public institution for security purposes. *(continued on
next page)*

(Local Codes continued from page 4)

A fence proposed for a residential use is allowed with a maximum height of eight (8) feet. There are some limitations to this maximum height requirement based on the proposed location of the fence. If the fence is proposed to be located within 15 feet of a designated major or minor thoroughfare or collector street, the fence shall not exceed six (6) feet in height. If the fence is proposed to be located within 15 feet of a designated local residential street, the fence shall not exceed four (4) feet in height. These distances are measured from the property line abutting the street right of way. There is an exception if the residential use is located on a corner lot where the rear lot line adjoins the rear lot line of another corner lot, the fence height may be a maximum of six (6) feet. This allowance does not apply to situations where a corner lot adjoins the side lot line of another corner lot.

For commercial, industrial, institutional, office or other nonresidential use, a fence shall not exceed eight (8) feet in height unless the fence observes the required principal building setbacks or is at least fifteen (15) feet from all property lines. In commercial districts where it may be necessary for security reasons for the fence to be topped with barbed wire or other razor type wire, the maximum height includes the wire placed on top of the fence. For recreational uses, such as athletic fields and tennis court fencing, the fence height is limited to eight (8) feet unless the placement observes the principal building setbacks or is at least fifteen (15) feet from the property lines. Otherwise, no fence shall exceed twelve (12) feet in height.

When measuring the height of a fence, it is measured at the highest point, not including columns or posts. The installed fence will be measured for compliance by measuring from the grade on the side nearest the abutting property or street. Columns and posts are not to extend more than eighteen (18) inches above the built height of the fence. So if the maximum height of the proposed fence is eight (8) feet, the posts or columns can be a maximum of nine and one half feet tall. Also the height of any retaining wall the fence may be placed on will also be considered in the overall height of the fence. A fence can be placed on the property line, provided there are no utility or drainage easements or any other issues which would prohibit placement on the property line.

There are additional requirements to be aware of as well. No fence shall be installed that would create any visibility problems at any intersection. The placement of the fence shall not block access from doors or windows for emergency egress situations. Fences shall not be installed to create any alteration or impede the natural flow of water in any stream, creek, drainage swale or ditch. If a fence is topped with barbed wire, the bottom strand of wire must be at least six (6) feet above grade.

There are certain areas, such as Historic districts, where the fence must meet the guidelines for the particular district. The fence application would require additional review and approval from the Planning Department and potentially the Historic District Commission prior to the issuance of a fence permit.

A fence permit is required for the installation of a new fence or the replacement of an existing fence. To obtain a fence permit, a completed application with proper documents must be submitted and reviewed prior to the installation of the fence. In most cases, a site plan or survey will be required to be submitted indicating the proposed location of the fence, the fence material, height and cost of construction. The cost of construction determines the permit fee. There may be situations where additional information may be required such as approval to place the fence in an easement or Historic District Commission approval documentation. Please be aware that any fence shown on a set of commercial building plans, for instance, requires additional review and permit.

Review of the commercial building plans does not include the review for fence regulation compliance. If a fence is installed for a new commercial project and there is no permit for the fence, this may delay occupancy due to the fact that the zoning final inspection will not be approved until the fence permit is obtained.

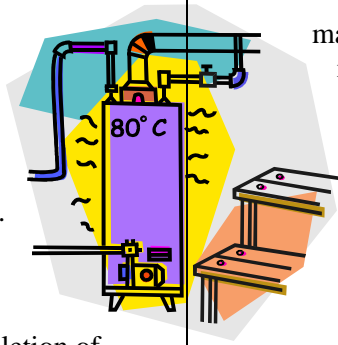
The installation of some fences may require a building permit as well as the fence permit. Depending on the height and type of construction, additional construction plans may be required to obtain all the proper permits.

MECHANICAL

Common Mechanical Violations:

The following have been identified by the NC State Board of Examiners of Plumbing, Heating and Fire Sprinkler Contractors (June-July 2008) as common miscellaneous actions that result in violations and failed field inspections.

1. Failure to perform manual 'D' and 'J' calculations before installation of system.
2. Over-fused the air condition unit.
3. Failed to secure a permit in timely manner.
4. Failed to obtain 'final inspection' within 5 days of substantial completion of installation.
5. Failed to secure re-inspection within 10 days after the request for final inspection.
6. Failure to label gas lines and or seal the gas line sleeve at wall penetrations.
7. Failure to seal and secure bottom of supply and return duct connections at equipment.
8. Failure to provide access platform on service side of coil/equipment.
9. Failure to splice flex duct together per manufacturer's instructions.
10. Failure to secure drain pan under coil, to prevent movement.
11. Failure to insulate refrigerant lines completely to coil cabinet.
12. Failure to remove operating manual from the inside of the equipment, allowing the opportunity for fire to *cause damage* to the equipment.



Gas Water Heater Installation

1. Installer of water heaters need to leave a note at the water heater, indicating the location of the expansion device installed on the domestic water system, so it can be verified, if same is not at water heater location.
2. Some direct vent water heaters vent termination; require a specific distance from gas meter and gas regulators or other house

wall openings.

Installers, particularly involving "change outs and replacements" need to verify that

manufacturer's instructions will allow replacement water heater to be installed in the same location as the previous water heater.

CSST Gas Piping:

1. Problems are still occurring, especially in changing out gas equipment and adding HVAC systems with the proper "grounding procedure" for CSST piping installation. Install piping per the manufacturer's instructions.
2. Most CSST instructions require a solid, secure wall outlet to be used for connections to "movable" appliances. One manufacturer gives examples as the following: gas ranges and clothes dryers.
3. Check manufacturer's instruction manuals for proper installation and inspector will be able to see wall outlets at rough-in inspection.

Outstanding Permits:

1. The contractor fails to call for "mechanical final" or after correcting required items, fails to "recall" for inspection.
2. The license holder is required by the Board of Examiners to request inspection within 5 days of substantial completion. In the case where corrections are to be made, the corrections and "recall" must be completed within 10 days of initial request for final inspection.
3. Contractors would be well served to keep a timely check on their permit status so they might be completed and closed in the permit records.

Insulation of Air Distribution Boots:

1. Where required by the code, air distribution boot must be individually wrapped with proper insulation. The pulling of R-8 rated flex duct liner over the boot as insulation is

not acceptable.

If you have any mechanical questions or comments please contact Mechanical Supervisor, Joe Kanoy at 336-883-3326.

PERMITS & RECORDS

New Year, New Revised Codes: 2009 North Carolina State Building Codes:

The effective date of the NC State Building Codes for Building, Energy Conservation, Fire, Fuel Gas, Mechanical, Plumbing and Residential is January 1, 2009 with a transition period until June 30, 2009. During those six months, applicants have a choice of using either the 2009 NC State Building Code or the existing 2006 NC State Building Code. The 2009 NC State Building Codes are based on the 2006 International Codes with NC amendments. These amendments are available at http://www.ncdoi.com/OSFM/Engineering/BCC/engineering_bcc_codes_2009_proposed.asp.

The current electrical code is the 2008 NC State Electrical Code which became effective on June 1, 2008, with the exception of Articles 338.10(B)(4)(a) and 406.11 which became effective on July 3, 2008. Articles 210.12 and 406.8(A), (B) (1) will become effective on January 1, 2009.

Adoption of Chapter 11 (Accessibility) of the NC State Building Code has been delayed for legislative review during the 2009 Session. Chapter 11 includes the reference to the ICC/ANSI A117.1 Standard (Accessible and Usable Buildings and Facilities). Until this issue is resolved, the 2002 NC State Accessibility Code with 2004 amendments will remain in effect.

The 2006 NC Rehabilitation Code and will remain effective until further notice.

General Contractor License Renewal:

All general contractor's licenses must be renewed annually. All general contractor's licenses expire on December 31 of each year. Failure to renew affects new and old permits for a contractor. Permits cannot be issued to general contractors with an expired license until licenses are renewed and no work can continue on existing permits for a general contractor with an expired license.

When is a licensed General Contractor required?

General Statute 87-1 defines a "general contractor" and when he is required to be

licensed. "Any person or firm or corporation who for a fixed price, commission, fee, or wage, undertakes to bid upon or to construct or who undertakes to superintend or manage, on his own behalf or for any person, firm, or corporation that is not licensed as a general contractor pursuant to this Article, the construction of any building, highway, public utilities, grading or any improvement or structure where the cost of the undertaking is thirty thousand dollars or more, or undertakes to erect a North Carolina labeled manufactured modular building meeting the North Carolina State Building Code, shall be deemed to be a "general contractor" engaged in the business of general contracting in the State of North Carolina." Per the General Statute, if you are paid by an individual or corporation to manage a project that has a value of \$30,000 or more that has secured a permit in their name; you must be a licensed general contractor.

For additional information go to the NC Licensing Board for General Contractor's website at <http://www.ncibgc.net/> or call them at 919-571-4183.

Permit Applications and Plan Submissions:

Do you know that the submission of an incomplete permit application package is the #1 reason permit issuance is delayed?

Be sure your submissions are complete. All commercial plans must have an Appendix B included in the plans. Plans for commercial buildings that exceed 2,500 square feet in area and that have a total value exceeding \$90,000 must be sealed by a registered design professional. This would also include the mechanical, electrical, and plumbing drawings. A layout of the existing building must also be submitted when the project includes the alteration of an existing tenant space or a proposed fit-up. This allows us to easily locate the proposed construction. A complete submission will help your project move quicker through the permitting process. Fill out application and all other forms in their entirety. Plan review fees are required

to be paid when the plans are initially submitted for review

Permits and plan review questions or comments should be directed to Supervisor, Ron Beard at 336-883-3285.

PLUMBING

Contractor License Renewal:

Once again it's the season for contractor license renewal. 2009 will be a required code continuing education year (a minimum of 4 hours must be on the 2009 code and changes). Please be aware that all contractors, before being allowed to renew their Plumbing contractor's license, must have completed a 6 hour continuing education class approved by the State Board of Examiners of Plumbing, Heating and Fire Sprinkler Contractors.

It has been stated in past newsletters from the State License Board, that licensees not having their required continuing education hours on January 1st will be reported to all inspection departments. Appropriate sanctions such as stop work orders and a hearing before the Board for working without a license will be carried out.

On January 1st all licensees who did not meet the continuing education requirements will not be allowed to purchase a permit or continue work on existing permits. All existing permits that are in effect at the time a licensee does not renew the license for the business, because of not having the continuing education hours, will become void. A new permit will have to be issued after the licensee has completed the requirements and the license has been renewed. No work will be allowed during the time a company does not have an active license.

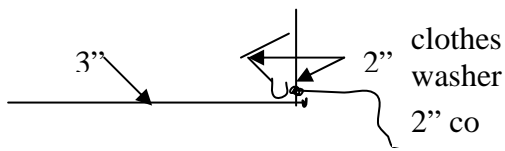
For further information you may contact **Erik Rogers, Continuing Education Coordinator, State Board of Examiners of Plumbing, Heating, and Fire Sprinkler Contractors. Phone: 919-875-3612 or Fax: 919-875-3616. Website: www.nclicensing.org**

Clothes Washer Reminder:

The Plumbing Section continually gets calls on the requirement that clothes washers must be connected to a 3" horizontal branch. Please note that the clothes washer cannot be the fixture supplying water for the wet vent. See Section 909.1 below.

Section 406.3 Waste connections (clothes washing machine): The waste from an automatic clothes washer shall connect to a vertical branch drain of not less than 2" in diameter, or a horizontal branch drain of not less than 3" in diameter. The 2" trap (fixture

drain only) or cleanout tee in the waste connection may be used as a cleanout for both the 2" and/ or the 3" branch.



Section 909.1 Wet vent permitted: Any combination of fixtures located on the same floor level is permitted to be vented by a wet vent. The wet vent shall be considered the vent for the fixtures and shall extend from the connection of the dry vent along the direction of the flow in the drain pipe to the most downstream fixture drain connection to the horizontal branch drain. A residential clothes washer drain line shall not be used as a wet vent.

NEW CODE ITEMS, the 2009 Plumbing code becomes effective January 1st 2009

Water Heater Relief Valve Locations:

Section 504.6 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap located in the same room as the water heater, either on the floor, into an indirect waste receptor or outdoors.
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge in a manner that does not cause personal injury or structural damage.
6. Discharge to a termination point that is readily observable by the building occupants.
7. Not be trapped.
8. Be installed so as to flow by gravity.
9. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.

- 10. Not have a threaded connection at the end of such piping.
- 11. Not have valves or tee fittings.

- 12. Be constructed of those materials listed in Section 605.4 or materials tested, rated and approved for such use in accordance with ASME A112.4.1. *(continued on next page)*

(Plumbing continued from page 8)

Water Heater Pan Drain Required:

Section 504.7 Required pan. Where water heaters or hot water storage tanks are installed in: (a) remote locations such as a suspended ceiling, (b) attics, (c) above occupied spaces, or (d) unventilated crawl spaces, the tank or water heater shall be installed in a galvanized steel pan having a minimum thickness of 24 gauge, or other pans approved for such use.

Exceptions:

1. Electric water heaters may rest in a high impact plastic pan of at least 1/16 inch (1.6 mm) thickness.
2. Water heater mounted on concrete floor where floor drains installed.

Should you have any questions or suggestions concerning the Plumbing Section, please contact Plumbing Supervisor Jimmy Lawson at 336-883-3275.

STAFF DIRECTORY

Administration	Office	Mobile
Edwin Brown, Jr. Admin ...	883-3328	
Permits & Records	883-3151	
Ron Beard, Supv	883-3285	
Carter, Connie.....	883-3313	
Guinn, Vickie.....	883-3308	
Sutton, Denise.....	883-3312	
Building		
Long, Darrell, Supv	883-3323	906-2239
Bender Christoph.....		906-0145
Magyar, Brian		906-2238
Hoffner, Herman.....		906-2251
Hancock, Tod.....		906-2245
Electrical		
Barham, Phil, Supv	883-3319	906-2223
Brazier, Larry.....		906-2213
Duncan, Mike		906-2226

Plumbing	Office	Mobile
Lawson, Jimmy, Supv	883-3275	906-2209
Lax, Jimmy		906-2235
Madeja, George		906-6660
Mechanical		
Kanoy, Joe, Supv	883-3326	906-2248
King, Craig		906-2237
Lax, Jimmy		906-2235
Local Codes		
Bossi, Katherine, Supv	883-3345	
Allison, Barry	883-3324	906-2253
Flowers, Donna.....	883-3505	906-2207
Hingleton, Toni.....	883-8575	
Wayman, Mark	883-3040	906-2246
Wall, Scott	883-3375	906-2249

City of High Point
Planning & Development Department
Inspection Services Division
P.O. Box 230, High Point, NC 27261

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Winter